

REMARKS

In accordance with the foregoing, claims 3 and 11 are cancelled without prejudice or disclaimer and claims 1, 4, 5, 10, 12, 18, 21, and 22 are amended. Claim 21 has been amended merely to provide proper antecedent form without narrowing the scope of the claim. Claims 1, 4-10, 12-18, 21, 22, and 25 are pending and under consideration.

Claim Rejections Under 35 USC § 103:

Claims 1, 7, 8, 9, 18, 20, and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent Number JP 11-306570 A to Shimokawa et al. (Shimokawa) in view of U.S. Patent Number 5,666,843 issued to Ezawa et al. (Ezawa), and further in view of U.S. Patent Number 6,968,563 issued to Nagai; claims 3-7, 21 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimokawa in view of Ezawa, in view of Nagai and in further view of U.S. Patent No. 6,091,553 issued to Song et al. (Song); claims 10, 11 and 14-17 are rejected as being unpatentable over U.S. Patent Pub. No. 2003/0193854 to Lee et al. (Lee), in view of U.S. Patent No. 6,163,416 issued to Uekusa et al. (Uekusa); and claims 12-13 are rejected as being unpatentable over Lee in view of Uekusa and further in view of U.S. Patent No. 5,446,721 issued to Sekimoto et al. (Sekimoto).

Claims 2, 3, 11, 19, 20, 23 and 24 have been cancelled.

Nagai describes a relay lens driving device provided in an optical head which moves a relay lens in the direction of an optical axis thereof. See Abstract of Nagai. The supporting rigidity in the X direction is provided by a magnetic spring effect attributed to force generated between a small iron piece 29 and a permanent magnet 26b. See col. 17, lines 32-37 of Nagai. The small iron piece 29 is set close to the center of coil 21b, and is composed of a ferromagnetic material such as a silicon steel plate. A permanent magnet generates a force F in the direction of the wiring axis for the coil. The small iron piece 29 and the permanent magnet 26b operate as pressing means for pressing the rail receiving section 49 against the guide rail. See col. 16, lines 1-9 of Nagai.

Claims 1, 7, 8, 9, 18, 20, and 22 Patently Distinguish over The Prior Art

The Office Action on page 3 rejects claim 20 under 35 U.S.C. § 103, however claim 20 has been canceled. Applicants disregard this rejection. The Office Action on page 3 has not listed claim 7 as rejected, however, claim 7 is rejected on page 6, therefore Applicants have addressed this rejection.

Amended claim 1 recites inter alia:

wherein a first damping member is inserted within an entire center portion of the focusing coils and surrounded thereby.

The Office Action concedes that neither Shimokawa nor Ezawa teach or suggest the above feature, but contends that the small iron piece of Nagai is correlated with the claimed "first damping member."

Applicants respectfully submit that as the small iron piece of Nagai serves only to support rigidity in the X direction using a magnetic spring effect, it cannot be equated to a dampening member. As is known in the art, a magnetic spring effect will allow for a magnetic repulsive force to act in one directional axis, but with the side effect of creating instability in other axes, due to the nature of magnetic force vectors being arcs spanning between the two poles of the magnet.

Thus, a magnetic spring effect cannot be correlated with a damping member as inherently, magnetic springs will create instability in other axes, whereas a damping member merely reduces the amplitude of oscillations of an oscillatory system.

Further, Applicants respectfully submit that the small metal piece of Nagai is not "in a center portion" but as stated in col. 16, lines 2-3, is "set therein close to the center of the coil." FIGS. 22 and 23 of Nagai clearly show that the small metal piece is at least, inset from the center portion, and further, as described in col. 16, lines 33-34 and shown in FIG. 23, the actual center of the coil is reference no. 21b3. In FIG. 23 of Nagai, the small metal piece 29 is clearly shown to be away from the center of the coil 21b3.

Still further, amended claim 1 recites: "a first damping member is inserted within *an entire* center portion of the focusing coils." Support for this amendment can be found, for example, in FIG. 6 of the Application. As shown in FIG. 22 of Nagai, the small metal piece 29 does not occupy the entire center portion of the focusing coils, but merely one smaller part near the center of the focusing coils.

Therefore, Applicants submit that Shimokawa, Ezawa and Nagai, whether considered alone or in combination, fail to teach or suggest all of the features of claim 1 and claims 7-9 which depend therefrom.

Amended claims 18 and 22 recite at least a similar feature as described above with respect to claim 1, with differing scope and breadth. Therefore, for at least the reasons provided above regarding claim 1, Applicants respectfully submit that claims 18 and 22

patentably distinguish over Shimokawa, Ezawa and Nagai, whether considered alone or in combination.

In addition, claim 1 is amended to include the features of claim 3. As indicated in item 4 of the Office Action, Shimokawa, Ezawa and Nagai do not disclose, "the bobbin has corners and second damping members are respectively disposed at each corner," as recited in claim 1. Accordingly, Applicants also submit that Shimokawa, Ezawa and Nagai, whether considered alone or in combination, fail to teach or suggest all of the features of claim 1 and claims 7-9 which depend therefrom.

Claims 3-7, 21 and 25 Patentably Distinguish Over the Prior Art

Applicants respectfully submit that claims 3-7, 21 and 25 which depend upon claims 1, 18 and 22, respectively, patentably distinguish over Shimokawa, Ezawa, Nagai and Song for at least the reasons provided above regarding claims 1, 18 and 22.

Further, regarding claim 1, the Office Action concedes that Shimokawa, Ezawa and Nagai do not teach or suggest "wherein the bobbin has corners and second damping members are respectively disposed at each corner," but contends that the claimed "second damping members" correlates to the second damping fluid shown in FIG. 8, reference numeral 80 of Song.

Applicants respectfully submit that the second damping fluid of Song is not "disposed at each corner" of a bobbin, but rather is disposed between the second supporting plates 90 and 90' and the side portions of the magnet 30, as described in col. 7, lines 15-17 of Song.

Therefore, Applicants respectfully submit that claims 1, and claims 4-5 which depend therefrom, patentably distinguish over Shimokawa, Ezawa, Nagai and Song whether considered alone or in combination.

Claim 6 recites at least a similar feature as described above with respect to claim 1, with differing scope and breadth. Therefore, for at least the reasons provided above regarding claim 1, Applicants respectfully submit that claim 6 patentably distinguishes over Shimokawa, Ezawa, Nagai and Song whether considered alone or in combination.

Claims 10, 11 and 14-17 Patentably Distinguish Over the Prior Art

Claim 10 recites inter alia:

a bobbin which is receivable in the receiving hall so as to move together with the moving unit; and

damping members inserted above and below shoulder portions of both sides of the receiving hole near the objective lens so that a size of a second resonant peak is reduced;

The Office Action correlates the claimed bobbin with FIG. 5, reference numeral 14 of Lee, and contends that Lee in para. [0038] describes that reference numeral 14 moves together with reference numeral 10 of Lee, thus describing the claimed “move together with the moving unit.”

Applicants respectfully submit that nowhere in Lee is provided a description of reference numeral 14 of FIG. 5. Further, FIG. 5 of Lee does not depict whether the structure to which the focusing coils 13 of Lee are attached to, is “receivable in the receiving hall.” On the contrary, FIG. 5 depicts a blade 10, which appears to not be inside any type of “receiving hall” at all, but is itself its own structure. Therefore, Applicants submit that Lee fails to teach or describe at least the above mentioned features of claim 10.

Applicants respectfully request that if the Office Action maintains the current rejection against claim 10 based on Lee, that a specific citation to what structures, with proper description in Lee teach or describe the claimed “bobbin,” and “receiving hall.”

Further, the Office Action concedes that Lee fails to disclose the above claimed feature, but contends that FIG. 6, reference numerals 4 and 5 of Uekusa describe the claimed “damping member inserted in shoulder portions.” Applicants respectfully submit that FIG. 6, reference numeral 4 of Uekusa is described as a “damper case,” and does not resemble the claimed “shoulder.”

The Merriam-Webster OnLine dictionary provides one definition of shoulder as “an area adjacent to or along the edge of a higher, more prominent, or more important part.” Thus, Applicants submit that a case, defined by Merriam-Webster OnLine dictionary as “a box or receptacle for holding something,” is patentably distinguishable from the claimed “shoulder,” in that a case is a receptacle, or a box, whereas a shoulder is merely an “area along the edge.”

Further, claim 10 has been amended to recite “damping members inserted above and below shoulder portions.” This amendment further clarifies the “shoulder” structure and further distinguishes claim 10 from Uekusa. In contrast to the claimed “damping members,” the “damping material” of Uekusa is merely inserted *into* the “damper case” and not “above and below” any other structure.

Therefore; Applicants submit that claim 10 and claims 14-17 which depend therefrom patentably distinguish over Uekusa and Lee whether considered alone or in combination.

In addition, Applicants have amended claim 10 to include the features of claim 11. It is respectfully submitted that Uekusa and Lee whether considered alone or in combination do not disclose these features.

Claims 12 and 13 Patentably Distinguish Over the Prior Art

Applicants submit that claims 12 and 13 patentably distinguish over Lee and Uekusa for at least the reasons stated above regarding claim 10 from which claims 12 and 13 depend.

Further, the Office Action concedes that Lee and Uekusa fail to disclose "wherein a metallic heterogeneous material is mixed with the damping member," but contends that this feature is discussed in Sekimoto at col. 4, lines 2-5.

Applicants respectfully submit that Sekimoto discusses that the "damper member" may be formed of aluminium foil with a damper material adhered onto the aluminium foil, but does not teach or suggest a "metallic heterogeneous material *mixed* with the damping member." Applicants respectfully submit that mixing two materials together is patentably distinguishable over merely adhering one material to another.

Thus, Applicants submit that claims 12 and 13 patentably distinguish over Lee, Uekusa and Sekimoto whether considered alone or in combination.

Withdrawal of the rejections against the claims and favorable reconsideration of the claims is respectfully requested.

CONCLUSION:

Claims 1, 4-10, 12-18, 21, 22, and 25 are pending and under consideration. It is respectfully submitted that none of the references taken alone or in combination disclose the present claimed invention.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

Serial No. 10/706,949

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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Date: February 29, 2008

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